



# CONFERENCE PROCEEDINGS



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***CONFERENCE PROCEEDINGS***

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## PREFACE

The organizing is an evolutionary phenomenon, distinctive because of laws of existence and maintaining all structures in all processes of their functioning. As such, it is a civilizational phenomenon also that occurs as a component of human, individual and social activities and as a factor in the overall development of man and society. On the other hand, as a deliberate human activity, organizing involves seeking solutions to problems that occur on the way to achieving specific goals. No goal can be achieved without appropriate or necessary, or at least minimal organization of conditions, factors and processes needed for goal achievement. However, the modern era requires new types of leaders and managers, and new forms of organization; demands those who are willing and able to lead the company / corporation / state, in a distinct competitive environment, with all the good and bad sides brought by the globalization of world economy.

The organizers of the LIMEN 2016 conference - *Faculty of Engineering Management - Belgrade, Modern Business School - Belgrade, Faculty of Business and Management Sciences - Novo Mesto, Slovenia, Faculty of Business Management and Informatics - Novo Mesto, Slovenia, Business Academy Smilevski - BAS, Skopje, Macedonia, BAS Institute of Management, Bitola, Macedonia and Association of Economists and Managers of the Balkans headquartered in Belgrade - Serbia* – have recognized the problem that nowadays exists in most modern organizations: *so much management and too little of leadership*; so they organized Second International Scientific-Business Conference titled: Leadership and Management: Integrated Politics of Research and Innovations - LIMEN 2016 in Belgrade on December 15, 2016 at the Hotel Moskva.

Bearing in mind the challenges of a dynamic engagement in contemporary organizations, it is clear that within the analysis of these two important subjects should be applied interdisciplinary approach. For this reason, the main theme of the conference LIMEN 2016 was processed through the following key topics.

- Leaders and Leadership
- Entrepreneurship, Innovation, Creativity
- Management of Small and Medium-sized Enterprises
- Contemporary Strategic Management
- Financial Management and Banking
- Marketing Management
- Project Management



- GREEN Management
- Natural Resource Management
- Quality Management
- Management of New Technologies
- Management Information Systems
- Education Management
- Intercultural Management
- Public Sector Management
- Human Resources Management
- Organizational Behavior
- Business Ethics
- Labour Law
- Business Law

The aim of this year's conference is also achieved - bring together the academic community of the Balkans region and other countries and publication of their papers with the purpose of popularization of science and their personal and collective affirmation. The unique program combined presentation of the latest scientific developments in these areas, interactive discussions and other forms of interpersonal exchange of experiences.

The conference was opened by: **Prof. dr Karmen Erjavec**, Vice-Dean of the Faculty of Business Management and Informatics - Novo Mesto, Slovenia; **Prof. dr Vladimir Tomašević**, Dean of the Faculty of Engineering Management – Belgrade and a member of the Scientific Committee of the conference, **Prof. dr Goran Dašić**, Assistant Director of the Modern Business School from Belgrade and a member of the Scientific Committee of the conference and **Uroš Mirčević**, President of the Association of Economists and Managers of the Balkans.



Participation in the conference took a total of **192 researchers with the paper** representing:

- 16 different countries,
- 36 different universities,
- 37 eminent faculties,
- 5 scientific institutes,
- 9 colleges,
- various ministries, local governments, public and private enterprises, multinational companies, associations, etc.

In the Conference Proceedings of the LIMEN 2016 conference **97 papers** have been published on more than **800 pages**.

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4. Bulgaria
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## WHAT DRIVES CREDIT EUROIZATION IN EMERGING COUNTRIES? THE EVIDENCE FOR MACEDONIA

### ШТО ЈА ПРИДВИЖУВА КРЕДИТНАТА ЕВРОИЗАЦИЈА КАЈ ЗЕМЈИТЕ ВО РАЗВОЈ? ПРИМЕР ЗА Р. МАКЕДОНИЈА

Tatjana Boshkov<sup>31</sup>

Gligor Bishev<sup>32</sup>

Nevena Vrcelj<sup>33</sup>

**Abstract:** *In recent years, an increasing share of credit in the emerging countries in Europe has been denominated in foreign currency, a process also referred to as credit euroization. Despite warnings from researchers and central banks, the inherent risks associated with foreign currency (FX) lending have been underestimated or neglected by banks and borrowers. The global financial crisis induced a materialization of these risk factors. The weakening of emerging European countries currencies against the Euro led to a significant increase in the real costs of unhedged FX borrowing and consequently higher expected credit default risks for banks. The FX-loan and FX-deposit ratios do not capture the whole scale of euroization as transactions often take place outside of the banking channels. The high level of euroization is common in emerging countries in Europe as in countries with fixed exchange rate regime. Considering the exchange rate experience of Macedonia, it is likely to remain significantly euroized country for an extended period. An appropriate strategy could be support of the domestic market and maintain prudent policies that mitigate the risks of foreign currency. This paper shows the presence of the foreign currency mainly in the Macedonian economy and suggests that credit euroization is driven by foreign borrowings.*

**Key words:** credit euroization, FX, FX- loan, FX-deposit, Macedonia.

**Апстракт:** *Во последните години, зголемениот удел на кредити кај земјите во развој во Европа е деноминиран во странска валута, процес кој исто така е познат како кредитна евроизација. Покрај предупредувањата од страна на истражувачите и централните банки, ризиците поврзани со кредитираната странска валута е потценета или се запоставени од банките и должниците. Глобалната финансиска криза предизвика материјализација на овие ризик фактори. Слабењето на валутите кај европските земји во развој во однос на еврото доведе до значително зголемување на реалните трошоци за нехецираниите девизни задолжувања, а а последователно и со тоа се очекува повисок кредитен ризик за банката. Стапката на девизните кредити и девизните депозити не ја опфаќаат целата рамка на евроизација, кои како трансакции се случуваат надвор од каналите на банката. Високиот степен на евроизација е честа појава во земјите во развој во Европа, како и кај земјите со режим на фиксен девизен курс. Со оглед на девизниот курс на Македонија, веројатно таа ќе остане значително евроизирана за подолг временски период. Соодветната стратегија може да биде знак на поддршка на домашниот пазар и одржување на прудентни политики кои ќе ги ублажуваат девизните ризици. Овој труд го покажува присуство на странска валута,*

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главно, во македонската економија и сугерира дека кредитната евроизација е придвижувана од страна на странските зајмувања.

**Клучни зборови:** кредитна евроизација, девизи, FX-кредит, FX-депозит, Македонија.

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## 1. INTRODUCTION

The term euroization implies different monetary systems that use foreign currency as means of payment. Until the establishment of the European Monetary Union, the most widespread international reserve currency is dollar, in 2002 that function is assumed by the euro (Boshkov, 2015). Emerging Europe has been one of the most dynamic growth regions in the past years. Robust economic growth and the anticipation of EU integration fostered financial deepening (Eller, Frömmel and Srzentic, 2010). Rising incomes, the increase in banking sector activities and financial integration with more developed countries triggered an unprecedented credit growth throughout the region (EBRD, 2010). The denomination of an increasing share of these credits in foreign currency has become a distinctive feature of the catching-up process in the region (Rosenberg and Tirpák, 2008). This phenomenon, which is also referred to as credit dollarization or credit euroization<sup>1</sup>, however, exposes the financial system to a number of additional risk factors (Bordo, Meissner and Stuckler, 2010).

European countries have a higher degree of euroization of around 60% on average, compared to 25-30% - Latin America and 5-10% in East Asia (IMF, 2015).

The high level of credit euroization is considered as a challenge for politics. Euroization is a balance sheet risks for the economy, as well as debtors in FX, revenues and assets denominated in local currency that are subject to sudden changes in exchange rate (Baliño, 1999). As a result, currency risk could turn into indirect credit risk. In addition, high euroization reduces the effectiveness of monetary policy transmission as the central bank may affect local currency rates through its policy rate, but has little effect on foreign currency rates.

## 2. LITERATURE REVIEW

A variable, which is believed to be one of the most important explanatory variables for credit euroization, is the difference between the domestic lending rate and the foreign lending rate (Rosenberg and Tirpák, 2008). Another variable used to explain credit euroization is the share of *foreign currency deposits* in total deposits. Banks are typically prevented by regulation to exhibit large currency mismatches on their balance sheets (Calvo,

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2002). These would occur if banks receive deposits in foreign currency and lend in local currency. Banks thus try to align the amount of foreign currency loans they grant with the amount of foreign currency deposits they hold (Ozsoz et al., 2010). The EBRD (2010) also finds that the currency structure of bank deposits is a key determinant of FX lending.

Rosenberg and Tirpák (2008) introduce the *loan-to-deposit ratio* as a measure of the extent to which funding comes from abroad. The type of *exchange rate regime* is generally believed to influence the level of credit euroization. Arteta (2005) reports that there exist two competing views on the relationship between the exchange rate regime and currency mismatches. According to the majority view, fixed exchange rate regimes encourage currency mismatches, as economic agents feel to be protected from any kind of exchange rate fluctuation (Arteta, 2005).

<i>Studies</i>	<i>Title</i>	<i>Methods</i>
<b>Arteta, C. (2005)</b>	Exchange Rate Regimes and Financial Dollarization: Does Flexibility Reduce Currency Mismatches in Bank Intermediation?	Pooled OLS
<b>Basso, H., Calvo-Gonzalez, Jurgilas, M. (2011)</b>	Financial Dollarization: The Role of Foreign-owned Banks and Interest Rates	Feasible generalized least Squares (FGLS) Data on household and corporate level
<b>Bednařík (2007)</b>	Loan dollarization in V4 countries	OLS regressions
<b>Beer et al. (2010)</b>	Borrowing in foreign currency: The Austrian households as carry traders	Analysis of survey data Univariate tests Multivariate (multinomial) logit regressions
<b>Honig, A. (2009)</b>	Dollarization, exchange rate regimes and government quality	OLS random effects OLS fixed effects
<b>Rosenberg, C., Tirpák, M. (2008)</b>	Determinants of Foreign Currency Borrowing in the New Member States of the EU	OLS with country fixed effects

Table 1. Literature review of empirical studies on credit euroization

### 3. CREDIT EUROIZATION AND FOREIGN FUNDS CHANNEL IN EMERGING EUROPE

The degree of loan euroization determines the financial system's exposure to systemic credit risk in the case of large devaluations. Credit euroization is not uniform across the Central, Eastern and Southeastern Europe (CESEE region) (Figure 1). First, there are countries in Emerging Europe in which FX and FX indexed loans contribute more than two thirds of total private sector lending. This applies to the Baltic countries, Serbia and Albania. Second, there is a comparatively large group of countries where between one third and two thirds of total private sector loans are denominated in foreign currency. This group consists of Croatia, Hungary, Romania, Bulgaria, Macedonia, Moldova and Poland. Third, there are three countries, where FX loans play a relatively minor role - Russia, Slovakia and the Czech Republic.



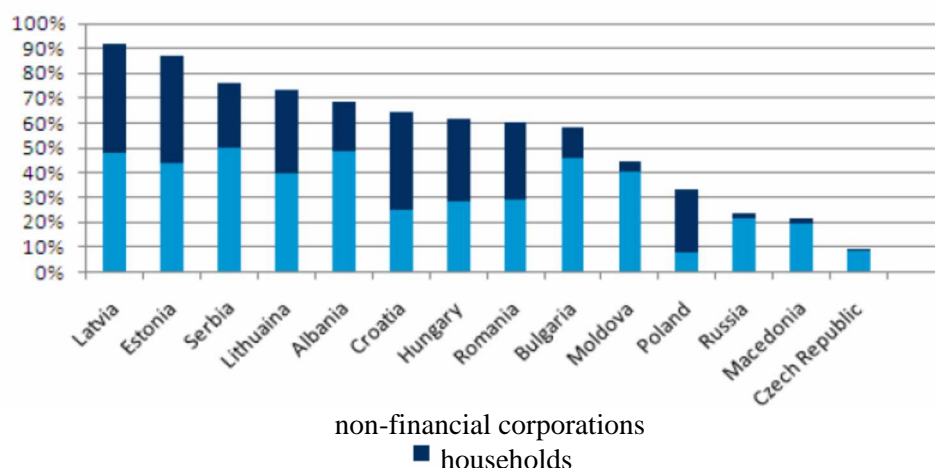


Figure 1: Share of FX loans in total private sector loans in Emerging Europe (2015)  
Sources: National central banks and authors compilation.

The Euro is by far the dominant currency for FX-Loans in the region. Figure 2 shows that, more than 90% of all FX-Loans in the selected countries where data are available are denominated in Euro. In Hungary, two thirds of all FX-Loans are denominated in Swiss Franc. The US Dollar and the Japanese Yen play only minor roles in some countries. Figure 2 shows the strong relationship between FX-deposits and FX-loans.

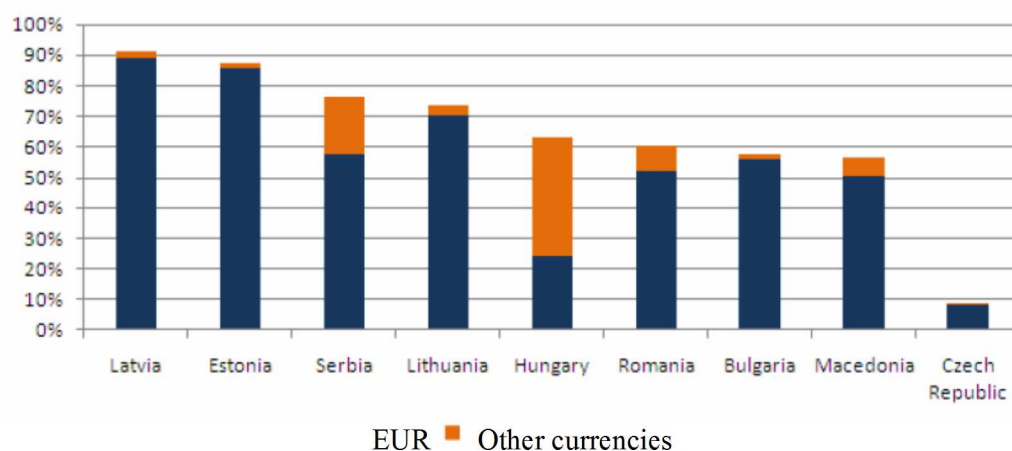


Figure 2: Currency denomination of FX-loans in selected CESEE countries, 2015  
Note: Macedonia: banking sector assets in foreign currency.  
Sources: National central banks and authors compilation.

The ability of banks to lend domestically in FX depends critically on their access to foreign funds. Some authors argue that foreign banks prefer to lend domestically in foreign currency. As a result, the premium these banks charge on domestic currency loans will increase, which will in turn increase the incentives for borrowing in foreign currency. An interesting question therefore is, whether foreign banks are actually more engaged in FX lending compared to domestic banks (Calvo, 2002). Figure 3 shows the deposits and loans in percentage of total deposits to the non-financial private sector and the strong relationship between FX-deposits and FX-loans.

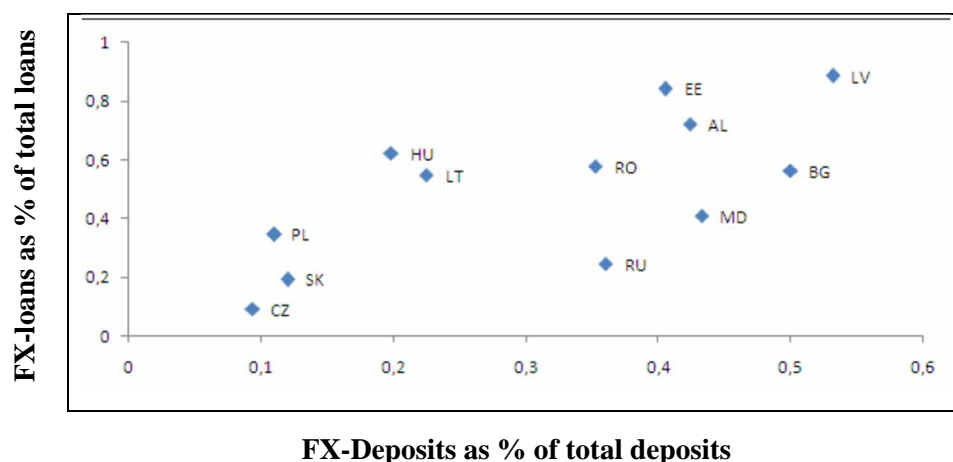


Figure 3: FX-deposits vs. FX-loans, 2015

Sources: National central banks and authors calculation.

Haiss and Rainer (2011) introduce the foreign funds channel in credit euroization, allowing foreign funds to enter the country not only through subsidiaries of foreign banks, but also through domestic banks borrowing abroad. In their model they present that banks have two possible sources of foreign currency supply (Figure 4). The first source is foreign currency deposits of residents. Secondly, to the extent that domestic supply of domestic currency deposits, FX deposits, equity and bonds) does not suffice to fund the desired (or demanded) pace of credit growth, banks might turn to foreign sources of capital to cover this “funding gap”.

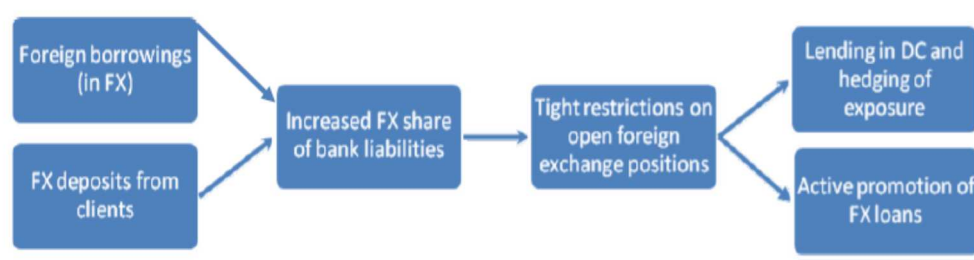


Figure 4: The foreign funds channel in credit euroization

Source: Haiss and Rainer, 2011

#### 4. EUROIZATION IN MACEDONIAN ECONOMY

Tackling about euroization in Macedonian economy, below we present that FX deposits of households/total of households show that after initial pick up of the deposits in foreign currency in the first wave of the crisis, they gradually reduced afterwards. The process of stabilization of the declining trend started in the second quarter of 2015. In recent years, foreign exchange (FX) and FX-indexed deposits amounted more than 50% of total deposits in the private sector in Macedonia. Credit euroization increased by 40% since the beginning of this decade and rose about 55% in recent years. Countries with fixed exchange rate are increasingly euroized compared to countries with flexible exchange rate regime. Macedonia has the lowest pillar, with over 55% in recent years that is below the average in the region. In terms of deposit euroisation, Macedonia is one of the most euroized country among others.

Analyzing the banks' deposits and credits currency structure on the liabilities side reflected on the assets side could be seen that there is dominant contribution of the Denar component (Figure 5 and Figure 6).

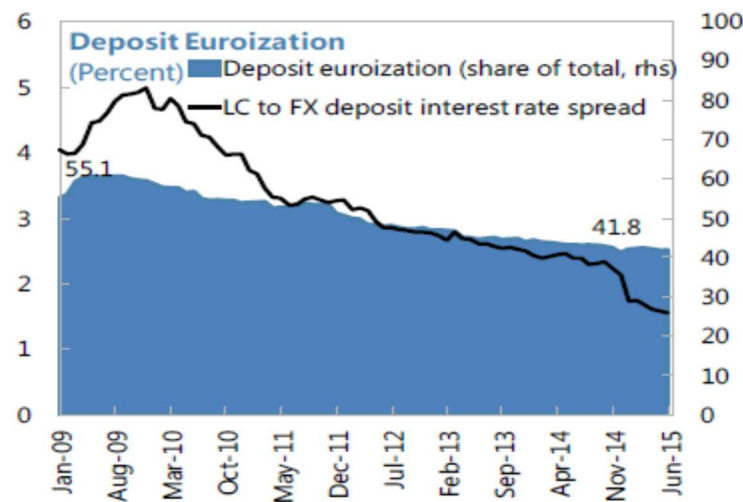


Figure 5. Deposit euroization, in %  
Source: NBRM, IMF.

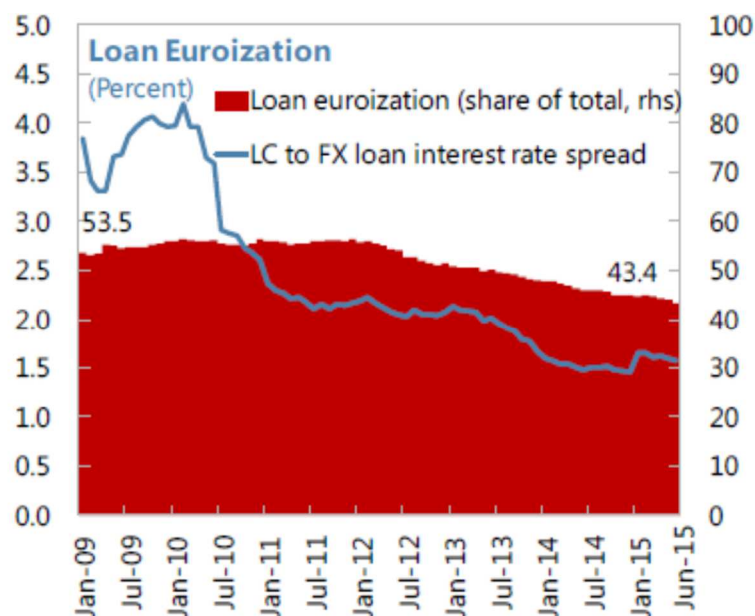


Figure 6. Loan euroization, in %  
Source: NBRM, IMF.

Macedonian banking system usually characterize with long FX position, while foreign liabilities to nonresidents are usually small or less than 10% of the total liabilities (Figure 7). In the acute stage of the global crisis, banks widened the spread between the Denar and FX deposit interest rates, but in the last years there is a trend of gradual spread reduction. The Central bank of Macedonia – NBRM shows measures in supporting the trend of de-euroization (Figure 8). For achieving greater progress towards euroization is necessary more time. But the history of countries that had successfully de-euroization show that its mainly countries with flexible exchange rate regime. Examples are Chile, Israel, Mexico and Poland (Reinhart et. al., 2003).

Since Macedonia has strong commitment for fixed exchange rate, which is peg, this can be credible reason to be harder for rapid de-euroization. Macedonia's long-term commitment to join the EU and eventually the euro area adds credibility to the exchange rate regime and make a move towards more exchange rate flexibility. De-euroization should be supported by macroeconomic stability, public debt management and development of the domestic financial market. For example, Israel, Chile and Poland started their process of de-euroization by reduced inflation and gradually stabilization of the economy as liberalization of the financial sector and capital account.

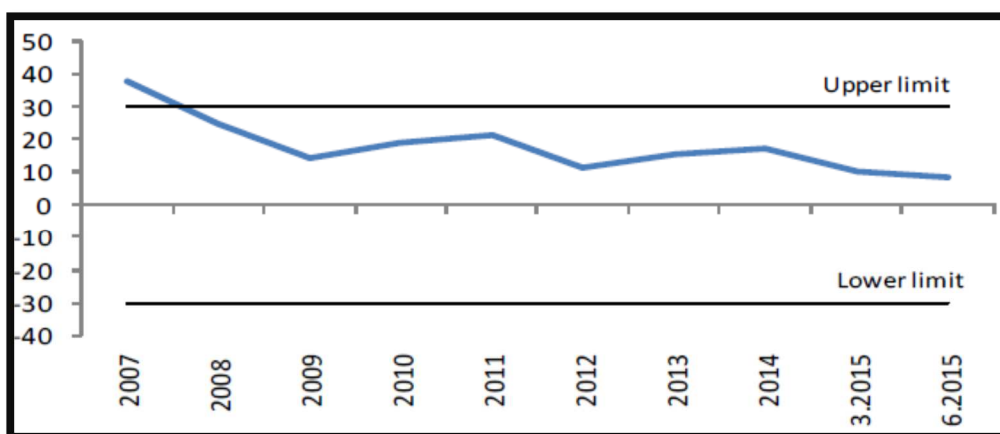


Figure 7. Assets and liabilities with FX component gap / banks' own funds (in %)  
Source: NBRM.

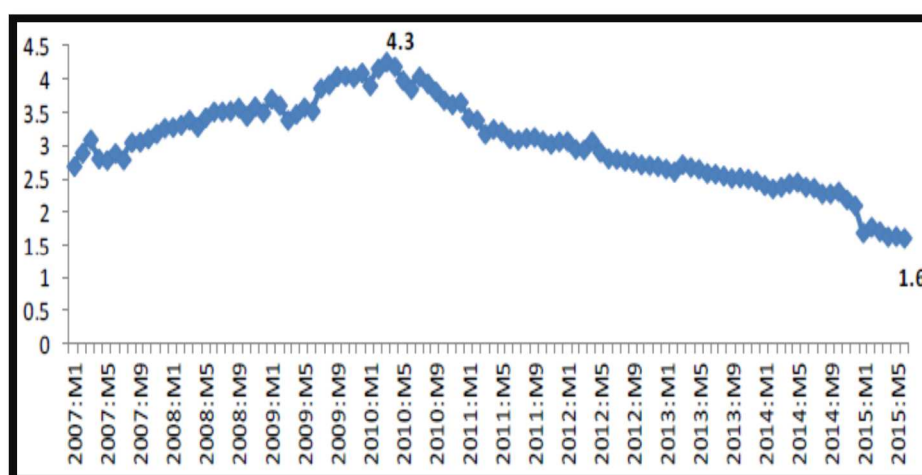


Figure 8. Interest rate spread between denar and foreign currency deposit rate (in p.p.)  
Source: NBRM.

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Reserve/STD(percent) <sup>1/</sup>	01.0	06.5	15.9	11.5	21.3	18.5	20.6	34.4	33.2
Reserve/Months of prospective import goods <sup>2/</sup>	.2	.2	.0	.2	.2	.2	.0	.6	.8
Reserve/Broad money (percent) <sup>3/</sup>	0.7	3.7	8.3	4.1	5.4	5.3	2.0	9.0	7.0

Expanded “Greenspan-Guidotti” metric: Reserves/(STD+ CA deficit)	1.6	8.8	10.0	7.7	00.9	00.0	03.1	13.6	12.9
Reserves/Fund combination metric (percent) <sup>4/</sup>	35.1	25.3	33.3	23.2	23.4	96.4	91.0	87.6	87.4

Tabel 2. Reserve adequacy ratios for Macedonia (2012-2020)

Notes: 1/ Suggested threshold for adequacy: 100 percent; 2/ Suggested range for adequacy: 3-6 months; 3/ Suggested threshold for adequacy: 20 percent; 4/ Suggested range for adequacy: 100-150 percent

IMF recommended a tightening of monetary policies should demand pressures pick up, a low probability in the current environment, or risks to financial stability emerge (IMF, 2015). Consumer and mortgage lending growth rates have been in the double-digits, which require vigilance. The authorities agreed and expressed their intention to use targeted macro-prudential policies to address risks concentrated in specific borrower group, while an increase in the policy rate would be considered in case of external or price stability risks. Staff supports this approach. Reserves are adequate according to various metrics and are projected to remain so in the medium term dampening external instability concerns (Table 2). Nonetheless, some policy tightening may be needed to preserve the ongoing de-euroization, which has a bearing on financial stability, should external uncertainties negatively impact the pace of private transfer inflows and conversion of deposits from foreign to local currency.

Credit history of the bank must contain all relevant details for the bank to establish the identity, creditworthiness, orderliness to perform its obligations and quality of collateral, including the approval and monitoring of exposures that are part of the retail portfolio and analyzes of exposure to the debtor of the exchange rate risk (Bishev and Boshkov, 2015).

### **Gligor Bishev**

*His career began in 1984 at the National Bank of Republic of Macedonia, first as a junior economist, and later in 1993 as General Manager. In 1994 he was appointed to be Vice-governor and in the period from 1997 to 2000 he was also Vice Governor of the National Bank of Macedonia. Since 2000, Gligor Bishev, PhD is General manager in Stopanska banka AD Skopje. Besides the professional engagement, Dr. Bishev is active in the field of economic sciences: Professor at the Faculty of Economics - Prilep; Faculty of Economics “St. Cyril and Methodius” in Skopje and on Institute of Economics “Ss. Cyril and Methodius”- Skopje. After completing his doctoral studies in 1991, he continued with his specialization in the London School of Economics and Political Science in 1995 and as a guest researcher at the Vienna Institute for Comparative Economic Studies in 1997. He has published two books, more than 312 articles and he has taken part in many discussions and research studies in professional and scientific journals in the country and the region.*



The reports show that since 2009 differentiation of the reserve requirement ratios and additional differentiation since mid-2013 are in favor of liabilities in domestic currency. Starting 2012 there are zero reserve requirements on deposits of households over 2 years to support long-term savings. 2015 is period where zero reserve requirements on Denar deposits of households over one year support long-term savings in domestic currency.



Macedonia is able to achieve macroeconomic stability under a fixed exchange rate and prudent fiscal policy in recent years, and has managed the global crisis relatively well. Active management of public debt and the development of the domestic financial market are important policies in supporting the de-euroization. The issuance of local currency-denominated public debt may be de-euroized balance sheet of the government as extend the yield curve of domestic currencies. The development of deep and liquid domestic financial market will increase the range of local currency – denominated securities and may contribute to the reduction of foreign exchange denominated assets (foreign currency deposits)(Rosenberg and Tripak, 2008). Encouraging the development of the domestic investor base such as pension funds, are likely to be supportive of demand for local currency instruments and markets in the long term.

### **Nevena Vrcelj**

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*Međunarodno poslovanje kao student generacije sa prosečnom ocenom 10,00. Master studije je završila 2013. godine na Fakultetu organizacionih nauka, smer Finansijski menadžment i menadžment finansijskog rizika sa prosečnom ocenom 10,00. Objavila je više naučnih radova i učestvovala na domaćim i međunarodnim naučnim konferencijama. Student je doktorskih studija Ekonomskog fakulteta Univerziteta u Kragujevcu. Event Manager je i osnivač Udruženja ekonomista i menadžera Balkana. Govori engleski i kineski jezik.*

De-euroization can be a lengthy process and can take in achieving macroeconomic stability. The public tends to have long memories of past crisis episodes, and watch the local currency as risky. Also when the public becomes accustomed to using foreign currency in financial transactions and not internalize the negative externality of using foreign exchange to the economy, de-euroization does not happen automatically, even in the case where the successful macro stabilization increase the attractiveness of the local currency.

Prudential regulation should be aimed to resolve the euroization. This will help to provide management with foreign exchange risks to provide buffers and to create soft initiative for de-euroization.

The economic and financial conditions prove that the current monetary policy setup is adequate. Exiting from accommodative monetary policy will mainly depend on changes in the external position of the economy and its effects on foreign reserves. As of June 30, 2015 the gross foreign reserves stood at EUR 2,254.8 million and foreign reserves registered a somewhat higher decrease than expected in the second quarter. Yet, foreign reserves adequacy indicators remain within the safe zone. The continuing process of de-euroization reflected by an upward trend of the share of Denar deposits in total deposits indicates the credibility of the monetary authority, the strengthened confidence in local currency and the preferences to favor domestic savings.

The Macedonian banking system is largely funded by domestic deposits and is very well capitalized. The legal minimum capital adequacy is 8 percent. In addition the authorities use moral suasion to induce large banks to maintain capital adequacy of at least 12 percent. Total deposit growth in June was somewhat influenced by lower household deposits due to the domestic political developments and the crisis in Greece but total deposits still increased by 8.8

percent on an annual basis at the end of the second quarter. Nonperforming loan ratios have stabilized and are fully provisioned.

## CONCLUSION

The results and literature overview in this paper suggest that credit euroization is driven by foreign borrowings, but that it is irrelevant whether the funds are channeled into the system via subsidiaries of Western banks (foreign bank channel) or via domestic banks borrowing abroad. The descriptive statistics on Emerging European countries from Central, Eastern and Southeastern Europe lead to the conclusion that the risks associated with FX lending appear to have been neglected or underestimated by borrowers and lenders across the region. The economic crisis, however, changed the situation markedly and led people to recognize the full extent of the risks associated with FX lending. The materialization of these risks led banks to dramatically increase the provisions for impairment losses, implying that they anticipated increasing credit defaults.

The newly introduced FX loan to FX deposit ratio, which was designed to measure the degree to which foreign currency supply comes from abroad, is significantly and positively related to credit euroization in all model specifications. This suggests that credit euroization is not only driven by foreign banks drawing on credit lines from their parent institutions and on lending these funds directly to local borrowers, but is also driven by domestic banks borrowing abroad.

Taking in account that Macedonia has fixed exchange rate peg to the euro, the confidence in the domestic currency is extremely important. The other facts are that foreign currency holdings are sensitive on economic and non-economic factors, increasing vulnerability of the economy. In addition, there is need of regular monitoring of leading indicators in this field and proactive role of the Central Banks in managing the risks. The evidences also, suggest that is difficult to reverse euroization. This is hard also when macro stability has been well established. There is some regional pattern of euroization and researchers think that it's related with the region economic integration into EU and aspiration for joining to the euro area.

Maybe, the best strategy is to provide incentives and a supportive macro-financial context for gradual reduction of euroization, through prudential policies and by maintaining macro stability and developing domestic debt markets. Macedonia has been implementing prudent macro policies and has achieved macro stability in the last decade, including during the global financial crisis. Maintaining such a policies is a pre-requisite of de-euroization. Given that the exchange rate peg has limited the scope of monetary policy to respond to inflation, fiscal policy could play a larger role, including by improving public debt management and relying more on longer term denar loans. This would be an important step to de-euroize the balance sheet of the public sector and to lengthen the yield curve, fostering the development of domestic debt market. A deep and liquid domestic capital market could provide more investment opportunities in denar as a substitute for FX-denominated assets, thus help the de-euroization.

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